

CURRICULUM VITAE

SIRINUN BORIPUNTAKUL, Ph.D., P.T.



PERSONAL INFORMATION



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EDUCATION

2008-2013 Ph.D. (Biomedical Sciences), Chiang Mai University, Thailand

2004-2006 M.S. (Movement and Exercise Sciences), Chiang Mai University, Thailand

2000-2003 B.S. (Physical Therapy), Chiang Mai University, Thailand



POSITIONS

2023-present Deputy head of Physical Therapy (Academic Services),
Faculty of Associated Medical Sciences, Chiang Mai University, Thailand

2021-present Committee of graduate course (Physical Therapy),
Faculty of Associated Medical Sciences, Chiang Mai University, Thailand

2019-present Head of Geriatric Physical Therapy, Department of Physical Therapy
Faculty of Associated Medical Sciences, Chiang Mai University, Thailand

2019-present Assistant Professor, Department of Physical Therapy,
Faculty of Associated Medical Sciences, Chiang Mai University, Thailand

2017-present Committee of postgraduate course (Master of Physical Therapy),
Faculty of Associated Medical Sciences, Chiang Mai University, Thailand

2013-present Instructor at the Department of Physical Therapy,
Faculty of Associated Medical Sciences, Chiang Mai University, Thailand



HONORS AND AWARDS

2008-2012 Office of the Higher Education Commission
2003 First Class Honor Degree, Chiang Mai University, Thailand



FUNDING

2024-2025 ผู้ร่วมวิจัย, เทคโนโลยีสุขภาพในการพัฒนาศักยภาพของสมองสำหรับผู้สูงอายุด้วยเทคนิคการฝึกความคิดความเข้าใจ ทุนวิจัยแบบมุ่งเป้าโดยการบูรณาการข้ามสาขา คณะเทคนิค-การแพทย มหาวิทยาลัยเชียงใหม่ ประจำปีงบประมาณ 2567 (100,000 บาท)

2023-2024 Co-investigator, Prevalence and factors associated with frailty and sarcopenia in diabetic patient in Pahsak Subdistrict, Muang District, Lamphun, Challenge Fund, Associated Medical Sciences, Chiang Mai University (100,000 Baht)

2022-2023 Co-investigator, Impairment of scapular control and related factors in individuals with chronic obstructive pulmonary disease (COPD), Associated Medical Sciences, Chiang Mai University (66,300 Baht)

2022-2023 Co-investigator, The validity and reliability of trunk control measurement scale (TCMS) in children with cerebral palsy-Thai version, Associated Medical Sciences, Chiang Mai University (68,000 Baht)

2022-2023 Co-investigator, The influence of chronic neck pain on gait asymmetry and gait variability in older adults, Associated Medical Sciences, Chiang Mai University (70,000 Baht)

2021-2022 Co-investigator, Development of a home-based exergame system to promote physical and cognitive health of older adults using computer vision, Chiang Mai University (100,000 Baht)

2021-2022 Co-investigator, A randomized controlled trial investigating the effects of combined physical-cognitive exercise and dietary intervention on cognitive

performance and changes in blood biomarkers of postmenopausal obese women, Chiang Mai University (752,000 Baht)

- 2021-2022 ผู้ร่วมวิจัย, การพัฒนาโปรแกรมกิจกรรมเพื่อพัฒนาคุณภาพชีวิตของผู้สูงอายุในโรงเรียนผู้สูงอายุ ด้วยการบูรณาการสหวิทยาการ ทุนวิจัยแบบมุ่งเป้าโดยการบูรณาการข้ามสาขา คณะเทคนิค-การแพทย์ มหาวิทยาลัยเชียงใหม่ ประจำปีงบประมาณ 2564 (100,000 บาท)
- 2021-2022 ผู้ร่วมวิจัย, โครงการฟื้นฟูเศรษฐกิจฐานรากด้วยการพัฒนาและยกระดับผลิตภัณฑ์ที่เป็นเอกลักษณ์ของชุมชนสู่ฐานเศรษฐกิจสร้างสรรค์มูลค่าสูง กิจกรรม: การส่งเสริมคุณภาพชีวิตและความปลอดภัยในชุมชน สถาบันวิจัยวิทยาศาสตร์สุขภาพ มหาวิทยาลัยเชียงใหม่ (120,000 บาท)
- 2021-2022 Co-investigator, Development of the smart system for tracking an instantaneous speed in an individual sprint athlete, Chiang Mai University (100,000 Baht)
- 2021-2022 Co-investigator, Validity of the video-based system for measuring gait speed in older adults using 10-meter walk test and timed up and go test. College of Arts, Media and Technology, Chiang Mai University (30,000 Baht)
- 2020-2021 Co-investigator, Effectiveness of multicomponent physical activity and cognitive training in frail and sarcopenia in community-dwelling Karen aging in Galyani Vadhana District, Chiang Mai: Randomized clinical trial, Associated Medical Sciences, Chiang Mai University (100,000 Baht)
- 2020-2021 Co-investigator, Prevalence and factors associated with frailty in community-dwelling Karen aging in Galyani Vadhana District, Chiang Mai, Associated Medical Sciences, Chiang Mai University (80,000 Baht)
- 2020-2021 Co-investigator, The effects of combined physical-cognitive exercise with dietary intervention on cognitive function and underlying mechanism of overweight and obese postmenopausal women, Associated Medical Sciences, Chiang Mai University (80,000 Baht)
- 2020-2021 Co-investigator, The effect of trunk muscle coordinate exercise on the trunk muscle activation, postural stability and gross motor function in children with cerebral palsy, Associated Medical Sciences, Chiang Mai University (80,000 Baht)

- 2019-2020 Co-investigator, The validity and reliability of the gait speed detection program for gait speed assessment in healthy older adults. College of Arts, Media and Technology, Chiang Mai University (30,000 Baht)
- 2018-2019 PI, A smartphone-based assessment of free-living gait in young adults and older adults with and without a history of falls, Associated Medical Sciences, Chiang Mai University (60,000 Baht)
- 2018-2020 PI, Effect of transitional gait speed and cognitive load on gait characteristics in individuals with Mild Cognitive Impairment, Thailand Research Fund (TRF) (600,000 Baht)
- 2018-2019 Co-investigator, Effectiveness of falls prevention training program in Thai elderly, National Research Council of Thailand (NRCT) (495,935 Baht)
- 2017-2018 Co-investigator, Comparison of range of motion and electromyography in adult riders, Associated Medical Sciences, Chiang Mai University (59,600 Baht)
- 2017-2018 Co-investigator, The relationship of arm curl test and strength and endurance tests with hand-held dynamometer in older adults, Associated Medical Sciences, Chiang Mai University (27,500 Baht)
- 2016-2017 Co-investigator, Comparisons of balance and gait characteristics of elderly while walking on shock absorbing flooring and vinyl flooring, The Siam Cement Public Company Limited (SCG)-Innovation and Technology Project (55,000 Baht)
- 2016-2017 Co-investigator, Validity of a smartphone-based accelerometer for gait assessment in older adults, Associated Medical Sciences, Chiang Mai University (52,302 Baht)
- 2016-2017 Co-investigator, The reliability of balance assessment by using swaymeter in normal and Down syndrome children age between 7-12 years old, Associated Medical Sciences, Chiang Mai University (48,796 Baht)
- 2015-2016 PI, Short-term effect of cryotherapy on balance, proprioception, and postural sway in Thai elderly people, Associated Medical Sciences, Chiang Mai University (32,700 Baht)

2010-2011 Co-investigator, Development and efficacy of cognitive training program for individuals with mild cognitive impairment: Evidence from biomarker analysis in brain by magnetic resonance spectroscopy and cognitive skills, BioMedical Engineering Center, Chiang Mai University (100,000 Baht)



RESEARCH INTERESTS

- Balance and Gait
- Fall in Older People
- Motor Impairment in Individuals with Cognitive Impairment



SERVICE TO THE FIELD

Manuscript Reviewer:

- PLOS One
- Brain and Behavior
- Disability and Rehabilitation
- BioMed Research International
- Archives of Allied Health Sciences
- Journal of Associated Medical Sciences
- Thai Journal of Physical Therapy



MEMBERSHIPS

The Physical Therapy Association Thailand



TRAINING

July 2012-January 2013 Neuroscience Research Australia, Sydney, Australia



PUBLICATIONS

International Publications:

1. Poosri T, **Boripuntakul S**, Sungkarat S, Kamnardsiri T, Soontornpun A, Pinyopornpanish K. Gait smoothness during high-demand motor walking tasks in older adults with mild cognitive impairment. PLoS ONE. 2024;19(1):e0296710. *Impact factor 2022=3.752*
2. Kamnardsiri T, **Boripuntakul S**, Kaiket C. Computer vision-based instantaneous speed tracking system for measuring the subtask speed in the 100-meter sprinter: Development and concurrent validity study. Heliyon. 2024;10:e24086. *Impact factor 2023=3.776*
3. Keawtep P, Kamnardsiri T, **Boripuntakul S**, Wichayanrat W, Worakul P, Sungkarat S. Feasibility of internet-based physical-cognitive exercise for health benefits of middle-aged obese women. Journal of Primary Care & Community Health. 2023;14:21501319231189961. *Impact factor 2022=3.16*
4. Kamnardsiri T, Thawinchai N, Parameyong A, Pholjaroen P, Wonglangka K, Prupetkaew P, **Boripuntakul S**. Conventional video-based system for measuring the subtask speed of the Timed Up and Go Test in older adults: Validity and reliability study. PLoS ONE. 2023;18(6):e0286574. *Impact factor 2022=3.752*
5. Keawtep P, Wichayanrat W, **Boripuntakul S**, Chattipakorn SC, Worakul P, Sungkarat S. Physical-cognitive training with dietary intervention to improve cognitive function and circulating biomarkers in postmenopausal women with obesity: Study protocol for a randomized controlled trial. Advances in Integrative Medicine. 2023;10(1):22-8. *Impact factor (2021)=1.91*
6. **Boripuntakul S**, Kamnardsiri T, Lord SR, Maiarin S, Worakul P, Sungkarat S. Gait variability during abrupt slow and fast speed transitions in older adults with mild cognitive impairment. PLoS One. 2022;17(10):e0276658. *Impact factor (2021)=3.752*
7. Keawtep P, Wichayanrat W, **Boripuntakul S**, Chattipakorn SC, Sungkarat S. Cognitive benefits of physical exercise, physical-cognitive training, and technology-based intervention in obese individuals with and without postmenopausal condition: A

- narrative review. *International Journal of Environmental Research and Public Health*. 2022;19(20):13364. *Impact factor (2021)=4.536*
8. Wichayanrat W, **Boripuntakul S**, Keawtep P, Worakul P, Sungkarat S. Obesity and brain health: The impact of metabolic syndrome and cardiorespiratory fitness on cognitive performances in middle-aged obese women. *The Journal of Prevention of Alzheimer's Disease*. 2022;9(4):701-7. *Impact factor (2020)=4.671*
 9. Parameyong A, **Boripuntakul S**, Thawinchai N, Chawawisuttikool J, Kamnardsiri T. Reliability and validity of the Swaymeter for measuring the trunk control in children with spastic cerebral palsy. *Developmental Neurorehabilitation*. 2022;25(7):462-8. *Impact factor (2021)=2.308*
 10. Kamnardsiri T, Phirom K, **Boripuntakul S**, Sungkarat S. An interactive physical-cognitive game-based training system using Kinect for older adults: Development and usability study. *JMIR Serious Games*. 2021;9(4):e27848. *Impact factor (2020)=4.14*
 11. Lugade V, Kuntapun J, Prupetkaew P, **Boripuntakul S**, Verner E, Silsupadol P. Three-day remote monitoring of gait among young and older adults using participants' personal smartphones. *Journal of Aging and Physical Activity*. 2021;29(6):1026-33. *Impact factor (2020)=2.7*
 12. Kamnardsiri T, Khuwuthyakorn P, **Boripuntakul S**, Janchai W. A Knowledge-based smart trainer system for transferring knowledge from coaches to long jump students. *Frontiers in Education*. 2021;6:1-10. *Impact factor (2020)=1.2*
 13. Sittichoke C, Buasord J, **Boripuntakul S**, Sungkarat S. Effects of compliant flooring on dynamic balance and gait characteristics of community-dwelling older persons. *The Journal of Nutrition Health & Aging*. 2019;23:665-8. *Impact factor (2019)=2.791*
 14. Taylor ME, **Boripuntakul S**, Toson B, Close JCT, Lord SR, Kochan NA, Sachdev PS, Brodaty H, Delbaere K. The role of cognitive function and physical activity in physical decline in older adults across the cognitive spectrum. *Aging & Mental Health*. 2019;23:863-71. *Impact factor (2019)=2.478*

15. Parameyong A, **Boripuntakul S**, Kamnardsiri T, Chawawisuttikool J. The validity and reliability of the Swaymeter for postural sway measurement in typically developing children aged between 7-12 years. *Gait & Posture*. 2018;66:273-7. *Impact factor (2018)=2.40*
16. Sungkarat S, **Boripuntakul S**, Kumfu S, Lord S, Chattipakorn N. Tai Chi improves cognition and plasma BDNF in older adults with mild cognitive impairment: A randomized controlled trial. *Neurorehabilitation and Neural Repair*. 2018;32:142-9. *Impact factor (2018)=3.757*
17. Sungkarat S, **Boripuntakul S**, Chattipakorn N, Watcharasaksilp K, Lord S. Effects of Tai Chi on cognition and fall risk in older adults with mild cognitive impairment: A randomized controlled trial. *Journal of the American Geriatrics Society*. 2017;65:721-7. *Impact factor (2017)=2.174*
18. **Boripuntakul S** & Sungkarat S. Specific but not global cognitive functions are associated with gait initiation in older adults. *Journal of Aging and Physical Activity*. 2017;25:128-33. *Impact factor (2017)=2.076*
19. **Boripuntakul S**, Lord SR, Methapatara P, Sungkarat S. Unplanned stopping strategy in individuals with mild cognitive impairment. *Walailak Journal of Science and Technology*. 2017;14:35-42. *Impact factor (2017)=0.16*

National Publications:

1. Maiarin S, Sungkarat S, Kamnardsiri T, **Boripuntakul S**. Increased spatiotemporal variability during unplanned gait speed transition in older adults with mild cognitive impairment. *Journal of Associated Medical Sciences*. 2021;54:17-25. *TCI 1 (2020)*
2. Puipanichsiri P, Sungkarat S, **Boripuntakul S**, Jinajin S, Tanakietpinyo S, Nantachai G, Ruangrukrien B. Comparison of the effectiveness of fall prevention training programs in healthy elderly. *Journal of Gerontology and Geriatric Medicine*. 2020;19:47-63. *TCI 2 (2020)*

3. Sittichoke C, **Boripuntakul S**, Worakul P, Sungkarat S. Effects of cognitive training on fall risk and cognitive performance in individuals with mild cognitive impairment. *Journal of Associated Medical Sciences*. 2020;53:92-9. *TCI 1 (2020)*
4. Ueawattanasirikul C, **Boripuntakul S**, Wonglangka K, Pinkaew D. Correlation between thoracic kyphosis and pulmonary function in elderly. *Journal of Associated Medical Sciences*. 2020;53:23-30. *TCI 1 (2020)*
5. Khamwong P, Silitertpisan P, **Boripuntakul S**, Pinkaew D, Tuanwaena P, Tadchana P, Pantueng S. The relationship of arm curl test and strength and endurance tests of elbow flexors with hand-held dynamometer in older adults. *Journal of Medical Technology and Physical Therapy*. 2019;31:412-8. *TCI 1 (2019)*
6. **Boripuntakul S**, Sungkarat S, Parameyong A, Ponljaroen P. Immediate effects of cold on balance and proprioception in Thai healthy older adults. *Journal of Associated Medical Sciences*. 2017;50:217-26. *TCI 1 (2017)*
7. Parameyong A, **Boripuntakul S**, Chawawisuttikool J. Test-retest reliability of balance assessment using swaymeter in children with Down syndrome aged 7-12 years. *Journal of Associated Medical Sciences*. 2017;50:253-61. *TCI 1 (2017)*
8. Saenphan W, Sungkarat S. **Boripuntakul S**, Watcharasaksilp K. Effects of home-based Tai Chi training on balance in older adults with mild cognitive impairment. *Bulletin of Chiang Mai Associated Medical Sciences*. 2016;49:123-33. *TCI 1 (2016)*
9. **Boripuntakul S**, Sungkarat S. Effects of up-and downslope walking on mean and variability of gait parameters in elderly women. *Thai Journal of Physical Therapy*. 2010; 32:55-61.

Ph.D. Degree Publications:

1. **Boripuntakul S**, Lord SR, Brodie MAD, Smith ST, Methapatara P, Wongpakaran N, Sungkarat S. Spatial variability during gait initiation while dual tasking is increased in individuals with mild cognitive impairment. *The Journal of Nutrition, Health & Aging*. 2014;18:307-12.

2. **Boripuntakul S**, Kothan S, Methapatara P, Munkhetvit P, Sungkarat S. Short-term effects of cognitive training program for individuals with amnesic mild cognitive impairment: A pilot study. *Physical & Occupational Therapy in Geriatrics*. 2012;30: 138-49.



Conference Proceedings and Oral Presentations

1. **Boripuntakul S**, Kamnardsiri T. Concurrent validity of a video-based system for assessment of gait speed adaptation in healthy older adults. The scientific subcommittee of world physiotherapy-AWP regional congress 2022 (Virtual international conference), 18-20 June 2022.
2. Kamnardsiri T, Khuwuthyakorn P, **Boripuntakul S**. The development of a gait speed detection system for older adults using video-based processing. 4th international conference on biomedical imaging, signal processing (ICBSP 2019), 17-19 October 2019, Nagoya, Japan.
3. **Boripuntakul S**, Panjaroen K, Kormkaew K, Yawisit P, Kamnardsiri T. Validity of a speed detection system for measuring gait speed in community-dwelling older adults. 3rd international conference on computational biology and bioinformatics (ICBB), 17-19 October 2019, Nagoya, Japan.
4. Kamnardsiri T, Kormkaew K, **Boripuntakul S**. The reliability of the video-based speed detection system for gait speed measurement in healthy older adults, on the 1st national conference on Thai society of biomechanics in sports (TSBS2019), 2 August 2019, Krabi, Thailand.
5. **Boripuntakul S**, Kamnardsiri T, Saksrisataporn K. Framework of an interactive game-based balance training system for improving standing balance using the Kinect sensor. 11th European conference games based learning (ECGBL) 2017, FH Joanneum University of Applied Science, Graz, Austria.

6. **Boripuntakul S**, Lord SR, Delbaere K. Mild Cognitive Impairment is a predictor of physical decline in older people. Graduate research conference 2013, Khon Kaen University, Thailand.



PATENT AND COPYRIGHT

- **Copyright Number 419402** (19 July 2022):
Smart system program for monitoring an instantaneous speed in sprinter.
- **Patent Number 16706** (31 August 2020):
External Audiovisual Synchronization Box.